



In the Drawings

Please accept the attached replacement drawing sheets for Figs. 1-5 and 8. Figs. 1-5 have been amended to include a "Prior Art" and resized to ensure satisfaction of the drawing requirements. Fig. 8 has been amended to resize the text to ensure satisfaction of the drawing requirements.

REMARKS

The Office Action mailed May 23, 2005, has been reviewed and carefully considered. Claims 10-16 and 18-24 have been amended. Claims 1-26 are pending in the application.

Applicants have corrected the dependency of claims 10-16 and 18-24 so that claims 10-16 now depend from claim 9 and claims 18-24 depend from claim 17. Accordingly, the restriction requirement as it pertains to 10, 12-16 and 18-24 should be withdrawn and claims 10, 12-16 and 18-24 rejoined.

In paragraph 4 on page 2 of the Office Action, Figs. 1-5 were objected to for lacking a label indicating Figs. 1-5 as prior art. In paragraph 5 on page 2 of the Office Action, Fig. 8 was objected to because the text was not in compliance with 37 C.F.R. § 1.121(d).

Applicants traverse the objection to the drawings, but in the interest of expediting prosecution have amended the drawings as suggested. Figs. 1-5 have been amended to include a "Prior Art" and resized to ensure satisfaction of the drawing requirements. Fig. 8 has been amended to resize the text to ensure satisfaction of the drawing requirements.

Accordingly, Applicants respectfully request withdrawal of the objection to the drawings.

In paragraph 7 on page 3 of the Office Action, claim 11 was rejected under 35 U.S.C. §112, second paragraph because elements of claim 11 lacked sufficient antecedent basis.

Applicants traverse the rejection, but in the interest of expediting prosecution have amended the claims to correct the dependency of claims 10-16 and 18-24. Applicants respectfully submit that the amendments overcome the rejections and that the rejection under 35 U.S.C. §112, second paragraph should be withdrawn.

In paragraph 10 on page 4 of the Office Action, claims 9-17 and 25 were rejected under 35 U.S.C. §103(a) as being unpatentable over Rachid et al. in view of Ishikawa.

Applicants respectfully traverse the rejection. Applicants respectfully submit that the cited references, alone or in combination, fail to disclose, teach or suggest Applicants' invention.

Applicants' independent claims 9, 17, 25 and 26 include the recitation of similar structure. With regard to claims 9, first and second hard bias layers are formed over the first and second ends of the first self-pinned layer respectively. The first and second hard bias layer abut the free layer and the first and second end of the first self-pinned layer extending under the hard bias layers at the first and second ends.

In contrast, Rachid fails to suggest a hard bias layer. Rather, Rachid discloses a head construction that includes a top and a bottom electrode layer. Applicants' hard bias layer is coupled to electrodes 680, 682 for providing the application of a sensing current into the free layer. Moreover, the bottom electrode layer of Rachid abuts the second pinned layer, not the free layer.

Accordingly, Rachid fails to disclose, teach or suggest Applicants' invention as recited in independent claims 9, 17, 25 and 26.

Ishikawa fails to remedy the deficiencies of Rachid. Ishikawa is merely cited as teaching the use of self-pinned layers. However, Ishikawa fails to suggest a hard bias layer that abuts the free layer. Rather, Ishikawa merely discloses a stack for a read head without a first self-pinned layer and a second self-pinned layer formed over only a central portion of the first self-pinned layer and a free layer formed in the central region over the second self-pinned layer. Accordingly, Ishikawa fails to disclose, teach or suggest a hard bias layer abutting the free layer, which extends only over a central region of a first self-pinned layer.

Accordingly, Ishikawa and Rachid, alone or in combination, fail to disclose, teach or suggest Applicants' invention as recited in independent claims 9, 17, 25 and 26.

Dependent claims 10-16 and 18-24 are also patentable over the cited reference, because they incorporate all of the limitations of the corresponding independent claim 9 and 17. Further dependent claims 10-16 and 18-24 recite additional novel elements and limitations. Applicants reserve the right to argue independently the patentability of these additional novel aspects. Therefore, Applicants respectfully submit that dependent claims 10-16 and 18-24 are patentable over the cited references, and request that the objections to the independent claims be withdrawn.

On the basis of the above amendments and remarks, it is respectfully submitted that the claims are in immediate condition for allowance. Accordingly, reconsideration of this application and its allowance are requested.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Attorney for Applicant, David W. Lynch, at 423-757-0264.

Respectfully submitted,

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